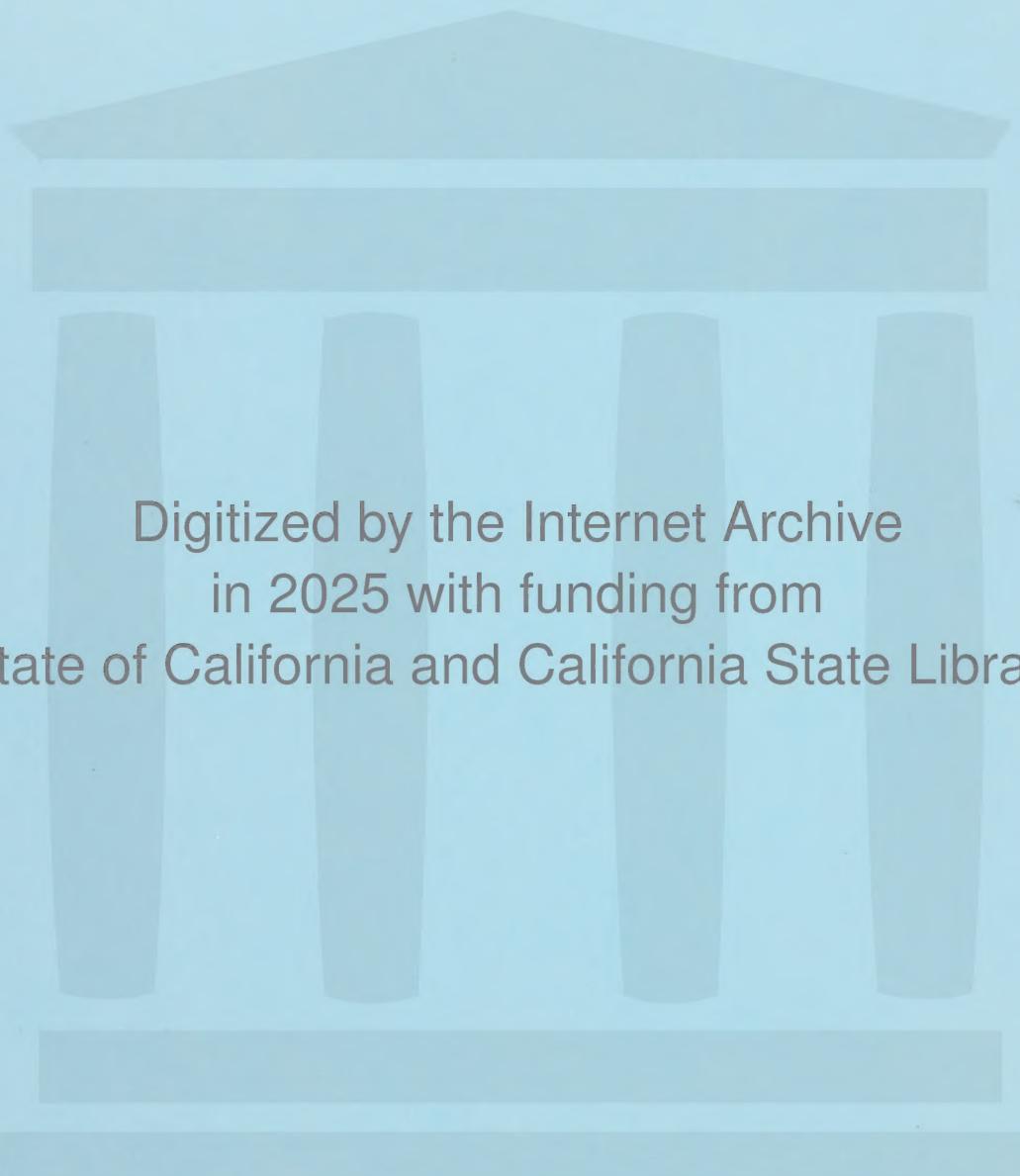


REPORT ON
BLACK INFANT HEALTH
IN SAN FRANCISCO: 1990

San Francisco Department of Public Health
Perinatal Services
Black Infant Health Improvement Project

October 1991
(Revised January 1992)



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NOTE

This report is based on data for 1990 births to Black mothers residing in San Francisco. The data was extracted from the AVSS system which contains San Francisco birth certificates for 1990. The data includes all births delivered in San Francisco and most reallocates (San Francisco residents who delivered elsewhere). It excludes reallocates not yet available to AVSS at the time the staff gathered the data. The 1989 data referenced in this report excludes all reallocates; however, the percentage of reallocate births that year is not significant.

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HIGHLIGHTS

ISSUES:

- High rate of adolescent pregnancy among African Americans.
- Poor rates of first trimester entry to prenatal care and maintenance of African Americans in care through pregnancy.
- High rates of low birth weight and infant mortality.
- High incidence of perinatal substance abuse and dependency petitions.
- Increasing rate of STDs including syphilis among women of reproductive age, demonstrating an increased risk for HIV infection.

FINAL RECOMMENDATIONS:

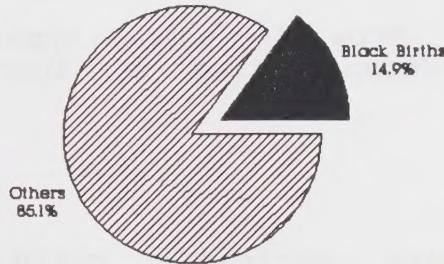
- Establish an ongoing perinatal child health monitoring/surveillance project that focuses on African Americans.
- Establish within the community of concern (individuals, neighborhoods, providers, and DPH), accountability/ responsibility for improving Black infant health.
- Identify African American providers in public and private sectors and forge cooperative agreements to increase services that are African American sensitive for the target populations. Identify African-American sensitive hospital staff (MSWs, RNs, nutritionists, health educators to work with African American women at SFGH obstetric and pediatric services.
- Explore causes of low birth weight, infant mortality, and develop feasible and effective responses.
- Follow up and report on the status of low birth weight babies.
- Identify and implement African-American sensitive/focused programs that address adolescent pregnancy, low birth weight and mortality prevention and other issues.
- Establish a model African American women's clinic that incorporates cultural competency and is acceptable to the target group.
- Establish tobacco free education, prevention and intensive cessation activities for African-American women of reproductive age and their families.
- Provide family life and parent education to African American families.

BIRTHS

In 1990, there were 79,039 Black residents in San Francisco, representing 10.9% of the total population.

During the same year, there were 9781 births in San Francisco to San Francisco residents. Of these, a total of 1455 (14.9%) Black babies were born to Black mothers.

Although the 14.9% represents a decrease from the 1989 rate of 16.3%, the 1990 birth rate among Black residents is disproportionate to their population in the city.



NEIGHBORHOODS

As in 1989, Black babies were born throughout the city. The births were again concentrated in Bayview-Hunter's Point, Visitacion Valley and the Western Addition. The distribution was as follows:

NEIGHBORHOOD*	# BIRTHS	% TOTAL
Bayview-Hunter's Pt.	369	25.4%
Visitacion Valley	198	13.6%
Western Addition	170	11.7%
Haight Ashbury	117	8.0%
Tenderloin	104	7.1%
Ingleside/Excelsior	94	6.5%
Inner Mission	83	5.7%
Potrero Hill	64	4.4%
Lake Merced	50	3.4%
So. Market	33	2.3%
(Polk/R. Hill, Presidio, Twin Peaks/Gln. Park, Treas. Island, Sunset, North Beach)	27-15	<2.0%
(Outer Richmond., Rich., Castro Chinatown, Rincon, Parkside, Miral., Marina, Unknown)	13-1	<1.0%

* Neighborhoods were determined by zip codes (see Figure 1 Appendix).

HOSPITALS

By November 1990, Mt. Zion and St. Mary's hospitals discontinued their labor and delivery services. As a result, both the University of California/San Francisco (U.C.S.F.) Hospital and San Francisco General Hospital (S.F.G.H.) increased their numbers of deliveries in 1990.

U.C.S.F. had the greatest percentage of Black births, representing a significant increase from 10.8% in 1989 to 20.5% of all Black births in 1990. St. Luke's, S.F.G.H., Children's and Kaiser also continued to deliver the majority of Black babies.

Black births in San Francisco had the following distribution:

HOSPITAL	# BIRTHS	% TOTAL
<hr/>		
U.C.S.F.	298	20.5%
St. Luke's	291	20.0%
S.F.G.H.	265	18.2%
Children's	233	16.0%
Kaiser	233	16.0%
Presbyterian	33	2.3%
St. Mary's	23	1.6%
Home	20	1.4%
Nonhospital	7	0.5%
Unknown*/Other	52	3.6%

*"Unknown" includes reallocates

Women in all neighborhoods generally delivered at the hospitals closest to them. In Bayview-Hunter's Point and Visitation Valley, however, significant numbers of mothers also went to hospitals further away (Figure 2 in the Appendix illustrates the proximity of hospitals to neighborhoods).

In Bayview-Hunter's Point, the majority of mothers went to St. Luke's (24.1% of births in that neighborhood) and S.F.G.H. (22.0%). Many mothers also delivered at hospitals further away: Kaiser (19.5%), and Children's (15.7%).

In Visitation Valley, most women went to St. Luke's (32.8%) and S.F.G.H. (17.7%). A total of 16.2% also went further away to Children's Hospital.

In the Western Addition, the majority of mothers delivered at U.C.S.F. (36.5%), S.F.G.H. (15.9%), Kaiser (15.3%) and Children's (13.5%). In 1989, many mothers in this neighborhood went to Mt. Zion. U.C.S.F. has increased its deliveries for women from the Western Addition since the discontinuation of Mt. Zion's labor and delivery services in November 1990.

MATERNAL AGE

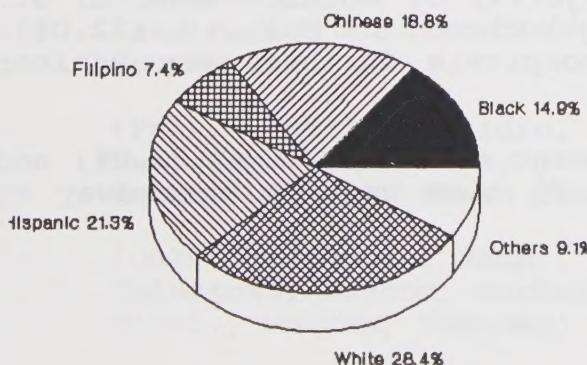
The majority of Black births occurred to women aged 18 to 34 years. There were no births to mothers under 13 years. Women in the 13-15 and 20-34 age ranges gave birth at slightly lower rates than they did in 1989. Women in the other age ranges gave birth at almost the same or slightly higher rates. Overall, the 1990 rates did not differ much from 1989. The mothers' ages were distributed as follows:

MATERNAL AGE (YEARS)	# BIRTHS	% TOTAL
13-15	35	2.4%
16-17	111	7.6%
18-19	173	11.9%
20-34	1044	71.8%
35+	92	6.3%

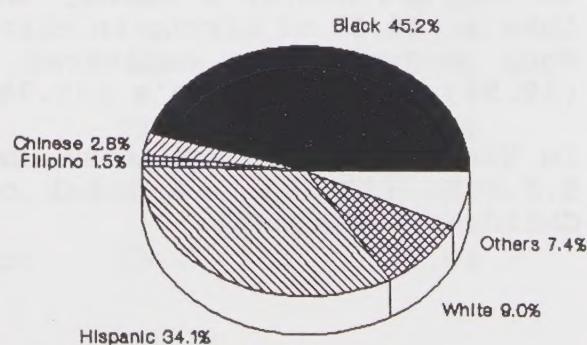
The rate of births among Black school-age teenagers (13 to 17 year-olds) decreased from 10.7% of all Black births in 1989 to 10.0% in 1990. However, the data indicate major disparities between Blacks and other groups in 1990.

Although Black births comprised only 14.9% of all births in San Francisco in 1990, Blacks accounted for a disproportionate 45.2% of all births to school-age teens. The pie charts illustrate these disproportionate rates among Blacks in San Francisco:

Percentage of All Births



Percentage of All School Age Teen Births



In 1990, school-age teens accounted for 3.3% of all births in San Francisco. At the same time, Black school-age teen mothers delivered a disproportionate 10.0% of all Black births in the city. This 10.0% rate of birth among Black school-age teens is higher than the rate among their peers in every other ethnic group that had a significant number of births in 1990. The following table illustrates some disparities among different ethnic groups:

Ethnicity	% School-age Teen Births
Black	10.0% of all Black births
White	1.1% of all White births
Hispanic	5.3% of all Hispanic births
Chinese	0.5% of all Chinese births
Filipino	0.7% of all Filipino births

PRENATAL CARE

STAGE OF PRENATAL CARE

In 1990, only a little more than half of the mothers had received prenatal care during the first trimester. In addition, the percentage receiving care in the first trimester decreased from 62.6% in 1989 to 57.9% in 1990.

PRENATAL CARE BEGUN	# BIRTHS	% TOTAL
1st trimester	843	57.9%
2nd trimester	425	29.2%
3rd trimester	124	8.5%
Not at all	58	4.0%
Unknown	5	0.3%

NUMBER OF PRENATAL CARE VISITS

In 1990, 40% of Black mothers had less than 10 prenatal care visits during their pregnancies. Good perinatal outcomes-- a healthy mother and baby-- are associated with the number of prenatal visits. Proponents of Public Health attribute the support of concerned health care workers, the educational and nutrition interventions, and physical monitoring during these visits as significant factors in positive outcomes. Fewer visits for Black mothers reduce the impact of such interventions. On average, a woman should have 10 visits during pregnancy.

# VISITS	% BLACK MOTHERS
<hr/>	
1 - 4	13.5%
5 - 9	26.4%
10 - 15	43.9%
16 +	11.8%
None/Unknown	4.4%

ADEQUACY OF PRENATAL CARE BY KESSNER INDEX

The Kessner Index was developed to indicate the adequacy of a woman's prenatal care based on a combination of three separate factors:

- month of pregnancy in which her prenatal care began
- number of prenatal care visits during her pregnancy
- length of her gestation period in weeks

The Kessner Index gives three levels of care: adequate (ADQ), intermediate (INTRM) and inadequate (INAD). The following table indicates the disparities between Black and White mothers in the levels of care they received in 1990:

ETHNICITY	ADQ.	INTRM.	INAD.	UNK.
<hr/>				
BLACKS	57.4%	29.6%	8.5%	4.5%
WHITES	86.2%	10.7%	2.1%	1.0%

The 1990 Index also indicates that Black mothers aged 13 to 17 years had lower rates of adequate prenatal care than Black mothers in other age groups:

AGE GROUP	ADQ.	INTR.	INAD.	UNK.
13 - 15	42.9%	31.4%	25.7%	0.0%
16 - 17	50.5%	38.7%	7.2%	3.6%
18 - 19	51.4%	34.1%	9.2%	5.2%
20 - 34	59.9%	27.3%	8.1%	4.7%
35+	54.3%	34.8%	6.5%	4.3%

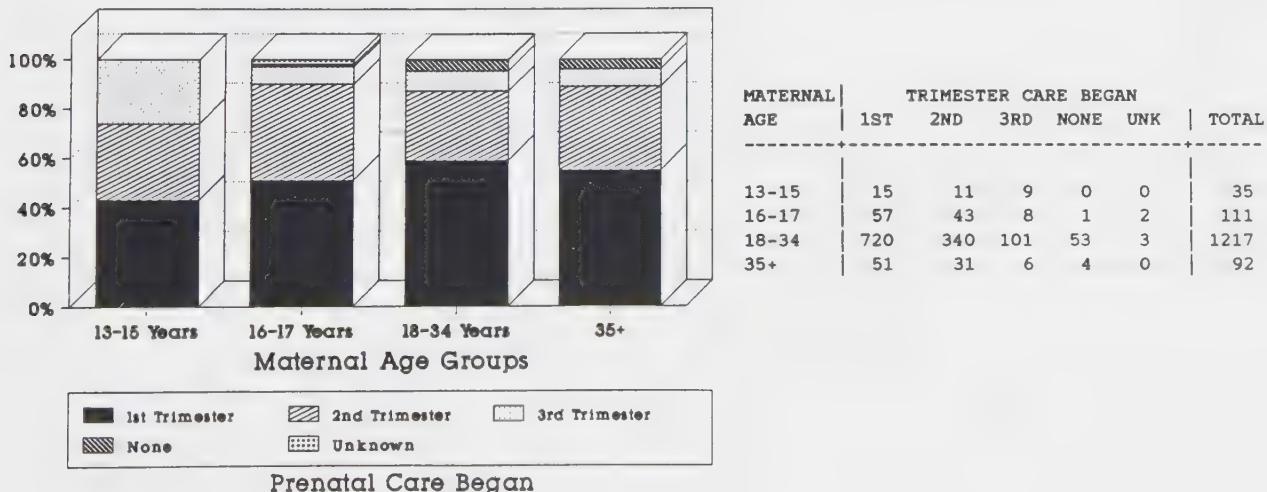
MATERNAL AGE AND PRENATAL CARE

There was a 3% increase since 1989 in the percentage of younger mothers (13-15 years) who received prenatal care in their first trimesters. The trend for all age groups, however, is toward later entry into prenatal care.

Among 13 to 15 year-olds, there was a sharp decrease since 1989 in the percentage who received second trimester care, and a sharp increase in the percentage who received third trimester care or no care at all.

Among mothers 35 years or older, there was a sharp decrease since 1989 in the percentage who received first trimester care, and a sharp increase in the percentage who received second trimester care.

Maternal Age and Trimester Prenatal Care Began

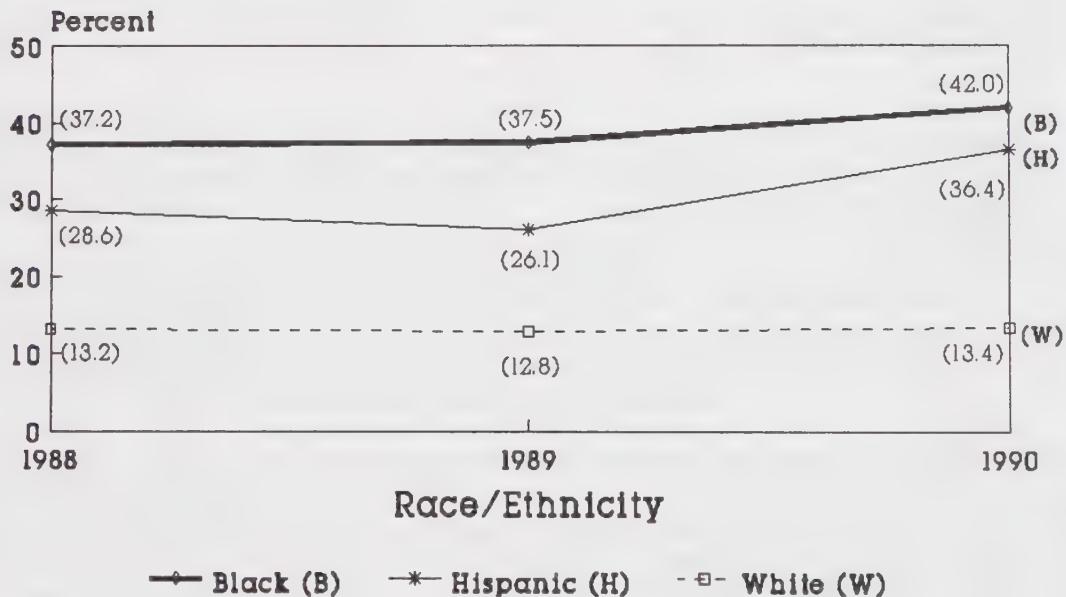


TRENDS IN PRENATAL CARE

Black mothers lacked early prenatal care at consistently high and increasing rates in 1988 (37.2%), 1989 (37.5%) and 1990 (42%). In addition, Black mothers have had consistently higher rates than Hispanic and White mothers. In 1990, Black mothers were over three times as likely to receive late care than White mothers.

The following line chart illustrates some trends in rates of early prenatal care among Black, Hispanic and White mothers in San Francisco from 1988 through 1990:

**Trends in Percent of Resident Births
Without Early Prenatal Care* by Race/Ethnicity,
San Francisco, 1988-90**



Source: S.F. Birth Records, 1988 - 1990
S.F. Dept. of Public Health

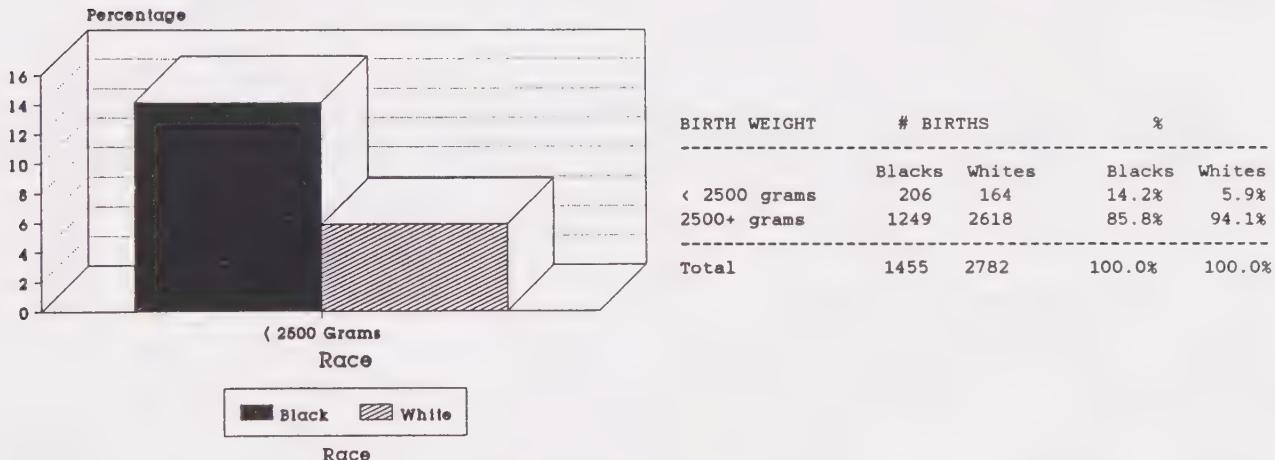
*Care begun after first trimester

BIRTH WEIGHT AND NUMBER OF BLACK BIRTHS

In 1989, AVSS data indicated the rate of low birth weight (below 2,500 grams or 5.5. pounds) among Black babies to be 15.5%. (The California Department of Health Services (DHS) reported the 1989 rate as 15.9%. This discrepancy may have resulted from the exclusion of reallocates in the AVSS data available at the time of the 1989 report.) Low birth weight can be attributed to various factors - adolescent pregnancy, poor nutrition, etc. It has been correlated with drug and alcohol use during pregnancy and it has been strongly associated with smoking. In a study conducted by Alameda County, smoking was the most significant factor in low birth weight for Blacks and Whites.*

According to AVSS data, the overall rate of low birth weight among Black babies in San Francisco went down from 15.5% in 1989 to 14.2% in 1990. The data are silent about what the reduction can be attributed to. However, nationally and in San Francisco, the Black low birth weight is two times the rate of Whites and poses a serious threat to the health of Black infants.

Low Birth Weight Rates
By Race



Of the neighborhoods with the most Black births (over 100), the rates of low birth weight were as follows:

Haight Ashbury	17.9%
Visitacion Valley	14.6%
Tenderloin	14.4%
Western Addition	14.1%
Byvw-Hunter's Pt.	12.5%

* Dr. Diana Petiti

PREGNATAL CARE AND BIRTH WEIGHT

The rates of low birth weight births decreased since 1989 at every trimester of prenatal care, especially the second trimester. However, of the group of mothers who delivered after receiving very late (third trimester) or no prenatal care, almost one out of four had low birth weight babies (24.2%).

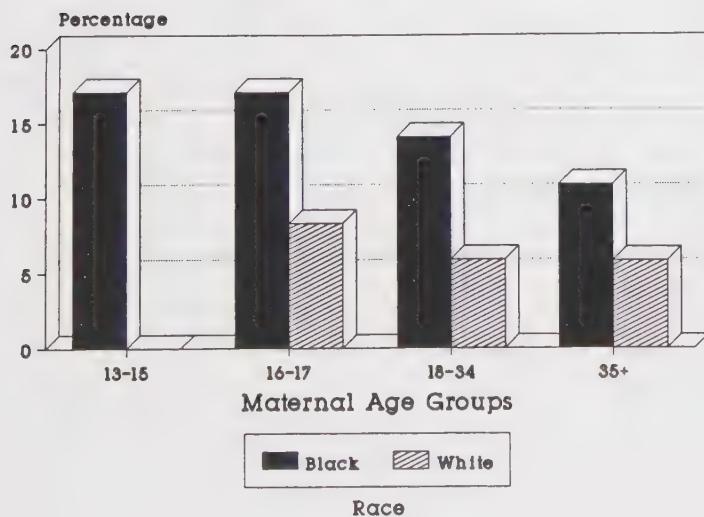
TRIMESTER PRENATAL BEGUN	%	#LBW	TOTAL
1st trimester	12.7%	107	843
2nd trimester	12.9%	55	425
3rd trimester	17.7%	22	124
None	37.9%	22	58
Unknown	0%	0	5
Total	14.2%	206	1455

MATERNAL AGE AND BIRTH WEIGHT

In 1989, rates of low birth weight increased as the mother's age increased. The 1990 data show a reversal of this trend: the rates of low birth weight decreased as the mother's age increased.

Also, the rates of low birth weight for the younger mothers increased sharply since 1989. Among 13 to 15-year-old mothers, for example, rates rose from 11.6% in 1989 to 17.1% in 1990. Among 16 to 17-year-olds, rates rose from 10.6% to 17.1%.

Low Birth Weight Rates
Maternal Age and Race



MATERNAL AGE	# < 2500 GRAMS		TOTAL BIRTHS	
	BLACKS	WHITES	BLACKS	WHITES
13-15	6	0	35	5
16-17	19	2	111	24
18-34	171	116	1217	1959
35+	10	46	92	794
Total	206	164	1455	2782

HOSPITALS AND BIRTH WEIGHT

Among the city's hospitals that delivered the most Black babies (more than 200) in 1990, U.C.S.F. and S.F.G.H. had the greatest percentage of low birth weight babies. Rates at delivery locations with fewer Black births may not be very meaningful. As noted previously, S.F.G.H. and U.C.S.F. significantly increased their deliveries of Black babies in 1990, including those of women at high risk of poor pregnancy outcomes.

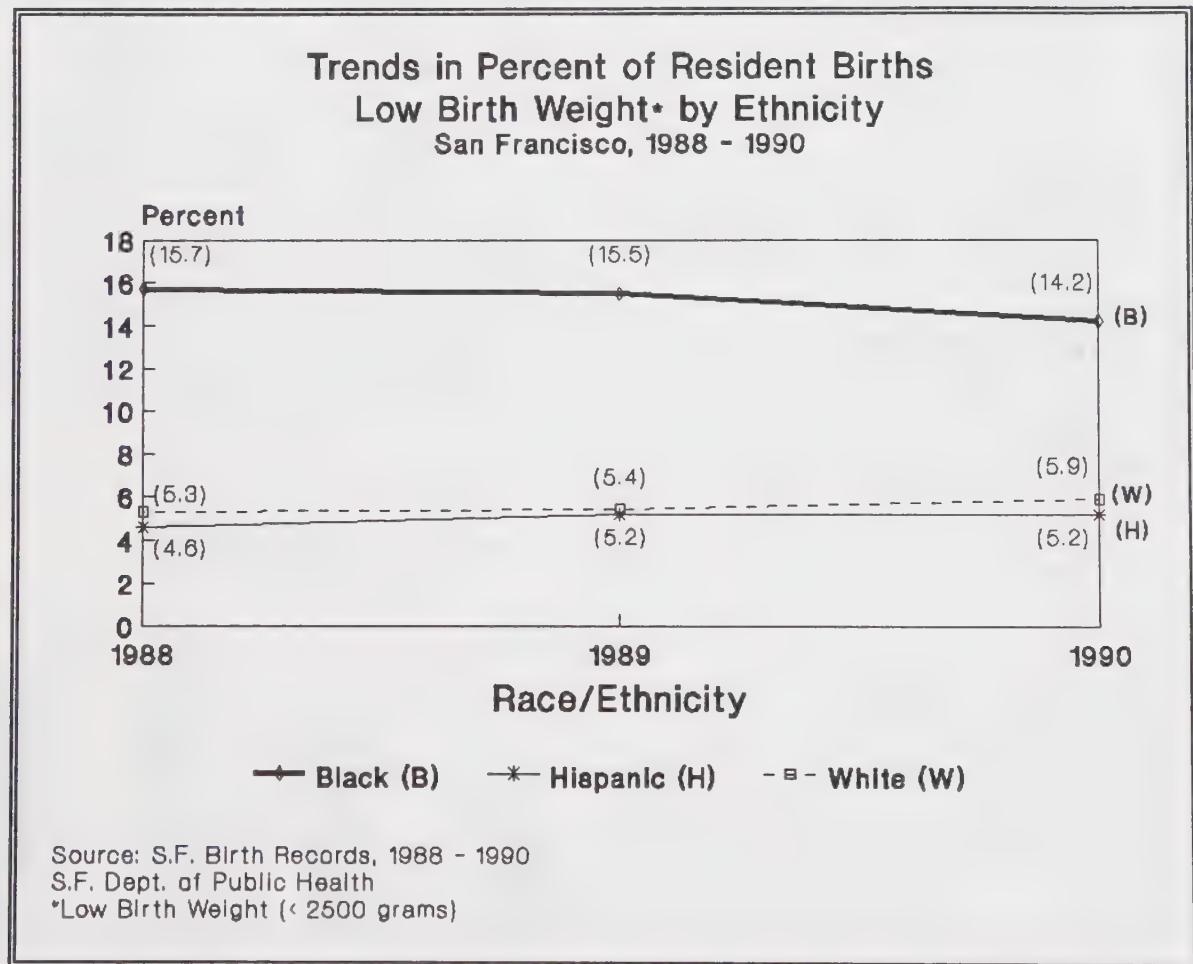
HOSPITAL	# LBW	%	TOTAL
U.C.S.F.	53	17.8%	298
St. Luke's	36	12.4%	291
S.F.G.H.	39	14.7%	265
Children's	30	12.9%	233
Kaiser	26	11.2%	233
Presbyterian	3	9.1%	33
St. Mary's	5	21.7%	23
Home	4	20.0%	20
Nonhospital	2	28.6%	7
Unknown*	8	15.4%	52
Total	206	14.2%	1455

*"Unknown" includes reallocates

TRENDS IN LOW BIRTH WEIGHT

Rates of low birth weight among Black babies went down from 15.7% in 1988, to 15.5% in 1989 and 14.2% in 1990. However, the rate of low birth weight among Black babies has remained at least two and one half times that of both Hispanic and White babies throughout these years.

The following line chart illustrates trends in low birth weight rates among Black, Hispanic and White babies from 1988 through 1990:



GESTATIONAL AGE AND NUMBER OF BLACK BIRTHS

Gestational age is the age of a fetus or newborn, usually expressed in weeks dating from the first day of the mother's last menstrual period. Generally, the normal gestational period is 37-41 weeks. Infants born before 37 weeks often experience short or long term health problems.

Less than 20% of Black babies born in San Francisco in 1990 had up to 37 weeks gestation. This is a decrease from the 1989 rate of almost 27% of Black babies born "preterm."

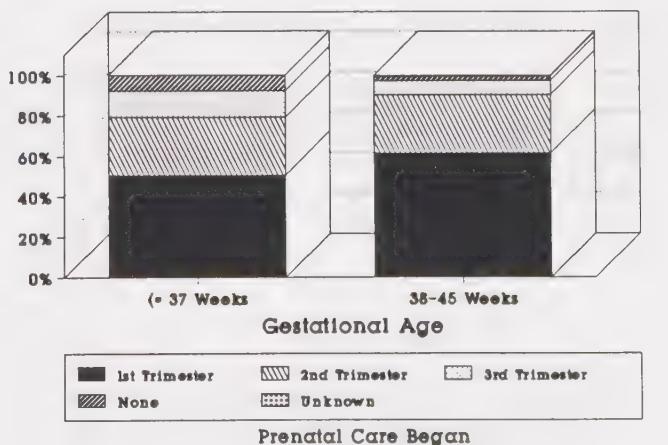
GESTATIONAL AGE (WKS)	#BIRTHS	% TOTAL
<= 37 wks	272	18.7%
38-45 wks	1120	77.0%
Unknown	63	4.3%
Total	1455	100.0%

GESTATIONAL AGE AND PRENATAL CARE

In 1990, over half of the preterm Black babies had mothers who actually began early prenatal care (in their first trimester.) Based on that, we would expect better outcomes. However, we do not know what other factors were present (for example, few visits, congenital or other defect, etc.).

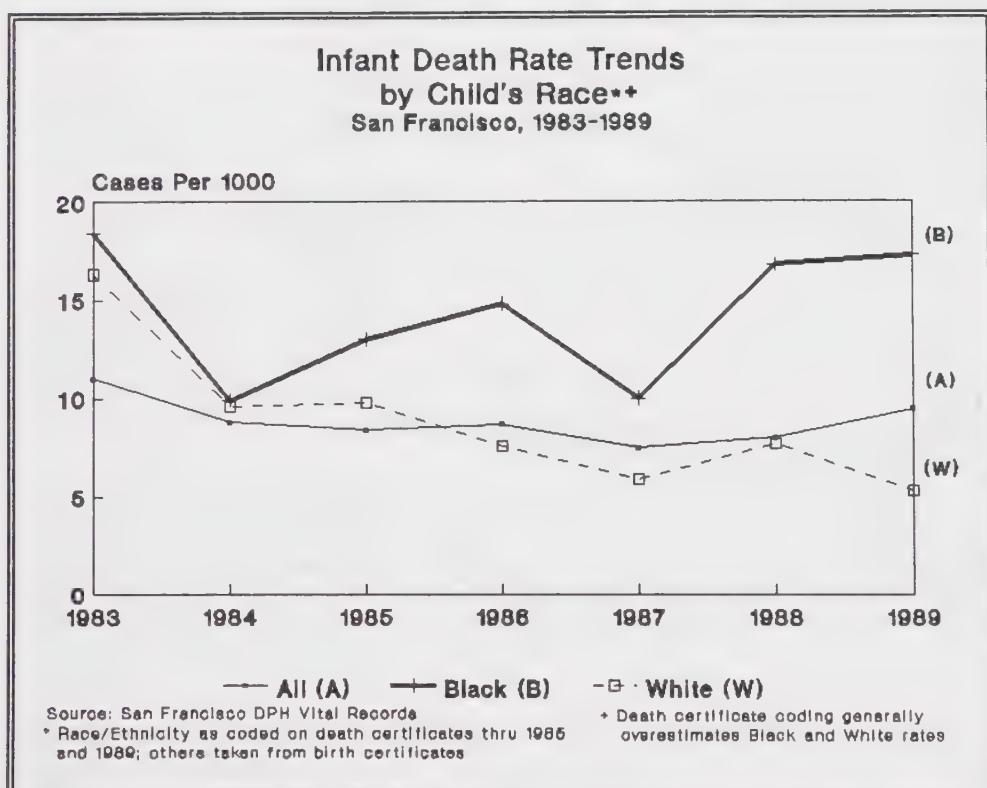
Gestational Age and Trimester Prenatal Care Began

GESTATIONAL AGE	TRIMESTER PREGNATAL CARE BEGAN					TOTAL
	1ST	2ND	3RD	NONE	UNKN	
<= 37 WKS	137	78	36	21	0	272
38-45 WKS	688	324	80	25	3	1120
Total	825	402	116	46	3	1392



INFANT MORTALITY

Infant mortality is defined as death of infants between 0 and 12 months old. Infant mortality rates are considered markers for the health of the entire community or nation. In San Francisco for 1989*, the rate of infant mortality was 9.47/1000 births. The rate for Blacks was 17.29/1000. The rate for both Blacks and other groups is below the national rate (9.73/1000)**. The Year 2000 Objectives (a national plan to improve the nation's health) has set an overall rate of 7 deaths per 1000 or less.



Ethnicity	1983	1984	1985	1986	1987	1988	1989
Black	18.4	9.9	13.0	14.8	10.0	16.8	17.3
White	16.3	9.6	9.8	7.6	5.9	7.7	5.3
All	11.0	8.8	8.4	8.7	7.5	8.0	9.5

* provisional rates based on SFPH statistics.

** provisional rates from the National Center for Health Statistics
Monthly Vital Statistics Report
National Center for Health Statistics

Causes of Black Infant Deaths

Preliminary data for 1990 show the causes of death as follows. While some of these deaths were unavoidable, many could have been prevented with earlier prenatal care and detection, improved nutrition and cessation of drug use and treatment.

Congenital Anomalies	2
Infective and Parasitic Diseases	2
Maternal Pregnancy Complex	1
Intrauterine Hypoxia and Birth Asphyxia	3
Maternal Conditions Possibly Related to Pregnancy	2
Other Respiratory Conditions	2
Respiratory Distress Syndrome	1
SIDS	4
Diseases of Nervous System & Sense Organs	1
Diseases of Circulatory System	1
Diseases of Respiratory System	1
Symptoms, Signs & Ill-Defined Conditions, excluding SIDS	1
Unintended Injuries (Accidents)	3
Homicide	1
AIDS	1
TOTAL	26

OTHER INDICATORS

SUBSTANCE ABUSE

In the 1989 Kellog Report on Perinatal Health, perinatal substance abuse was cited as a problem. To date, there is no reliable or realistic system for measuring parental substance abuse. However, the Department of Social Services dependency petitions can be used as a marker of the incidence of perinatal/parental drug and alcohol abuse. The number of petitions filed decreased from 1989 to 1990 for all groups except Asians and Native Americans. There is no evidence that explains why this decrease has occurred.

Number of Substance Abuse Dependency Petitions Filed
Newborns 0 - 11 months

Race	Year 1990		Year 1989	
	Drugs/ Alcohol	Other	Drugs/ Alcohol	Other
African American	174	23	264	30
White	40	11	41	16
Hispanic	21	6	24	9
Asian	6	10	5	4
Native Americans	5	3	4	0

WIC ENROLLMENT

The Women, Infants and Children Program is a nutrition education and supplemental food program aimed at improving infant and child health. Studies have shown that for infants whose mothers participated in WIC through pregnancy, birthweights were generally above the norm (2500 grams). For low income families, WIC can serve as a marker of infant health.

In San Francisco, approximately 14,000 individuals are enrolled in WIC; pregnant and lactating women are 25%, infants 27%, and children under the age of 5 are others. In May of 1990, Blacks represented 22% of women enrolled (449 of 2041) and 24% of infants ages 0-12 months (848 OF 3499).

SEXUALLY TRANSMITTED DISEASES AND HIV INFECTION

The rates of sexually transmitted diseases among Black men and women of all ages, but in particular reproductive ages, have increased in the late 1980s. For most other ethnic groups the rates have remained stable. Penicillin resistant gonorrhea (PPNG) rates in Blacks went from a low of less than 50 cases per 100,000 residents in 1988 to approximately 450 in 1990. Syphilis rates for Blacks during the same period increased from 200 cases per 100,000 to over 600 cases per 100,000. The rates of congenital syphilis among black infants parallels these increases and is the highest for all ethnic groups.

As of December 30, 1990, the San Francisco Department of Public Health, AIDS office* reported 26 cases of AIDS in children, ages 0-12; ten of these were Black. Nine of the ten are classed as children of high risk/AIDS parent(s). In other words, these children were infected during the perinatal period from the infected mother to fetus. For the same period, among Black women of reproductive age (ages 13-49), there were 36 cases of a total of 140 for all women.

Although the number of HIV cases in Black women and infants remains low, STD statistics are evidence of increasing amounts of high risk sexual behavior.

* AIDS cases reported between 1981 and 1990

APPENDICES

Glossary of Terms

Gestational Age-- Age of a fetus or a newborn, usually expressed in weeks dating from the first day of the mother's last menstrual period.

Infant Mortality-- Number of infant deaths under one-year-old per 1,000 live births.

Low birth weight (LBW) Infant-- Infant whose weight at birth is less than 2,500 grams or 5.5 pounds, regardless of his/her gestational age.

Preterm Infant-- Any newborn, regardless of birth weight, who is born before 37 weeks of gestation.

Prenatal Care-- Care of a pregnant woman during her maternity cycle. Prenatal care begins with conception and ends with the onset of labor.

School-age Teen-- A person between 13 and 17 years of age.

Substance Abuse-- Use of psychoactive substances, licit and illicit, despite negative physical, medical, psychological or social consequences.

Trimester-- One of the three periods of approximately three months into which a woman's pregnancy is divided.

SAN FRANCISCO NEIGHBORHOODS BY ZIPCODE

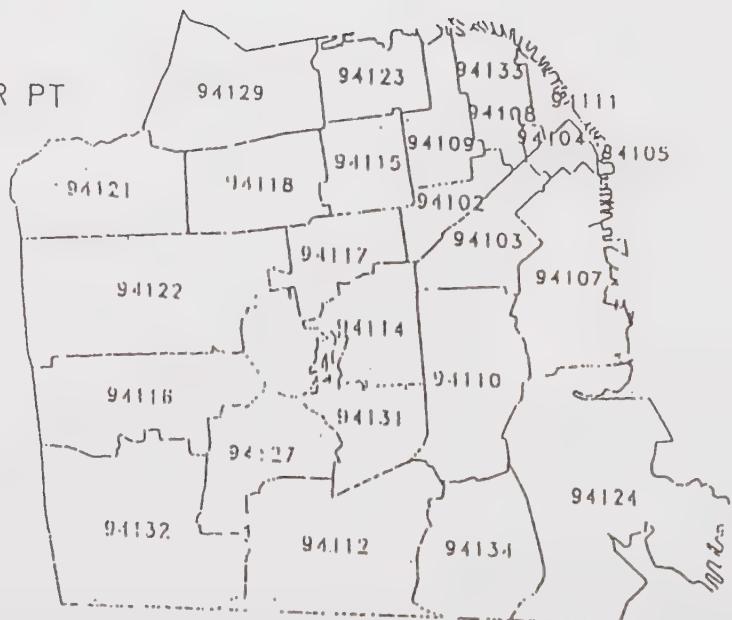
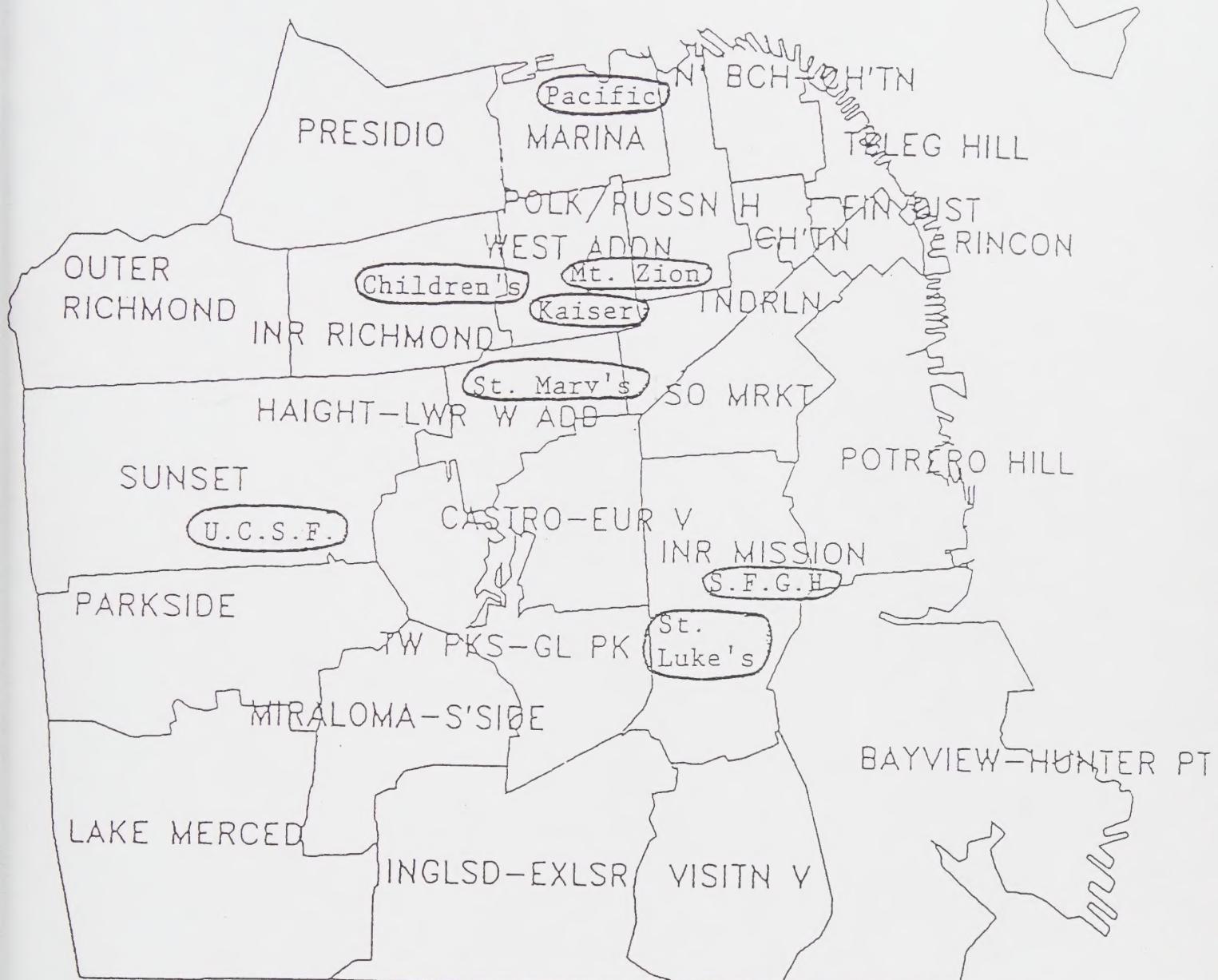


Fig. 2

SAN FRANCISCO HOSPITALS BY NEIGHBORHOOD



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